

Mapline

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Atlas of Historical County Boundaries



Historical Illinois county boundaries from 1814 appear in black overlaid on modern, white boundaries

All regular readers of *Mapline* know that the Newberry Library is an international leader in the history of cartography, but many of them may not know much about the library's contributions to historical cartography, the mapping of historical data. The earliest undertaking of that sort was *The Atlas of Early American History*, edited by Lester Cappon. That project commenced in 1970 and concluded in 1976 with the publication of a scholarly atlas on the period of the American Revolution, 1760-1790.



Historical county boundaries as they appeared in 1833

That atlas offered a number of innovative treatments of traditional subjects, such as edited and redrawn contemporaneous city plans, rather than modern reconstructions of the old street networks.

The Atlas of Early American History was followed by two spinoffs, both headquartered at the Newberry: the Historical County Boundary Data File project, directed by John Long (this author), and the *Atlas of Great Lakes Indian History* project, directed by the late Helen Tanner. The

data for the Indian history atlas emphasized the locations of Indian settlements, a groundbreaking approach (introduced in *The Atlas of Early American History*) that broke from the customary representation of Indians as nomadic people mappable only in vaguely defined areas. The county boundaries project, experimenting with both methods and products, published outlines of the historical states and counties of fourteen states, 1788-1980, both as maps in five printed volumes and as date-coded lines in one of the earliest historical cartography data files. The boundary plots were based on the most authoritative sources—the official boundary descriptions enacted into law by the colonial or territorial and state governments that created and could change them. Old maps and modern compilations were treated as less-authoritative secondary sources. In the late 1980s, Tanner again used the Newberry as her headquarters as she directed the compilation of a popular historical atlas on the peopling of North America from prehistory to the present.

The Newberry's most recent historical cartographic project, *The Atlas of Historical County Boundaries*, also directed by Long, commenced in 1987 and concluded in 2010. The goal was to build on the earlier boundary atlas to compile the day-to-day evolution of state and county boundaries in all fifty states from the earliest county (in Virginia) in the 1600s to 2000 and to disseminate the results in formats that would be useful to the largest possible audience. Experience in the earlier project indicated that county research could be successfully extended back to the beginning of the colonial period and that there was a demand for books and digital files alike. Given the relative immaturity of computer cartography in the mid-1980s, the overall plan was to compile the boundary changes for each state and to publish them first in atlas form. The plan assumed that digital map making would improve substantially during the time required for research and publication, and that waiting to convert the data from books to computer files would be the most efficient approach and would yield the best products. Support for *The Atlas of Historical County Boundaries* was provided by grants from the National Endowment for the Humanities, an independent federal agency, by the Newberry, and by gifts from Environmental Systems Research Institute (ESRI) and a number of private individuals and foundations.

Dissemination commenced with books, eventually totaling twenty-four states and the District of Columbia

in nineteen volumes of maps and text. Declining book sales and growing pressures to produce a digital product curtailed the book program before the entire country could be published in that form. The project concluded in the summer of 2010 with cartographic data files for every boundary change in all fifty states available free of charge from the Newberry's website as downloadable data sets and as interactive, viewable maps, the online equivalents of maps in atlases.

Of course, it is rare that events obediently unfold exactly as laid out in the strategic plan, and the county boundaries project proved itself no exception in that regard. Through the 1990s corporate mergers twice forced a change of publisher; attendant changes in editors brought delays. At the same time that publication slowed, improvements in computerized map making, especially geographic information systems (GIS), raced ahead faster than anticipated. Demand for intellectual infrastructure, especially GIS-compatible boundary data, spread irresistibly through academe and the general public. At the Newberry, we proposed altering the strategic plan and disseminating the data simultaneously as both books and digital files, but we were unable to reach an agreement with the publisher to proceed with this approach. The last volume was printed in 2001 and from then on the project concentrated solely on the digital product.

The general plan was revised, and in 2005 the Newberry launched a second, parallel project under the direction of Douglas Knox to convert the books to data files; John Long continued to oversee the compilation of historical counties in the remaining states. Rather than scan maps from the books, the staff perfected the technique of "heads up" digitizing to plot the lines of each historical county's shape on the computer screen on top of the image of a modern base map. Their electronic base map was the Digital Chart of the World and the mapping software was ArcGIS, donated by its maker, ESRI. As expected from the start, digitizing the historical boundary data took less time than collecting, processing, and plotting the data in the first place, and the historical and technical staff were able to apportion their time between the two tasks.

Over the last couple of years of the project, work continued on its website, enlarging its content and refining its design. The heart of this online atlas is the collection of downloadable, date coded, vector-graphic polygons—one for each configuration of each county and non-county

area—in the GIS-compatible shapefile format and the complementary texts, such as long and short metadata, bibliography, copy of the data base underlying each state's digitized counties, etc., but that is not all. Another important product is an interactive historical map of each state and its counties; thanks to the program ArcIMS, another ESRI product, users can select any date in the state's history and display and manipulate its historical counties, including overlays of modern boundaries, county seats, and

more. In addition the website also offers down loadable versions of the state and county lines in the KMZ format that is compatible with Google Earth, so users can display any chosen area of the U.S. with historical boundaries laid over the modern lines and landscape imagery provided by Google. We think this project decades in the making will have value for researchers for decades to come.

John H. Long

In Review

Richard Stachurski. *Longitude by Wire : Finding North America.* Columbia: University of South Carolina Press, 2009.

As promised by the title, the main story narrated in this book is the use of the electric telegraph in the determination of longitude, and more particularly, the development and perfection of that method in the United States by the Coast and Geodetic Survey. That story is told here, and well-told, by Richard Stachurski, an Air Force colonel and scientist with degrees in history and mathematics. But it is really more than that; it is, if I am not mistaken, the first effort, or at least the most thorough effort, to provide, in layman's language, an explanation of the technologies of 19th-century geodesy as applied to mapping.

After a brief review of the history of triangulation, from Gemma Frisius through Willebrord Snell and the Cassinis, he outlines the techniques which Ferdinand Hassler introduced to the Coast Survey. The narration is brisk and authoritative, with many colorful accounts of the difficulties faced by the men in the field. We learn about the painstaking measurement of baselines, the elaborate methods used to get accurate latitude measurements (not at all as straightforward as I have maintained on the occasions I've tried to explain it), and, of course the vexing problem of finding the longitude.

Finally, the telegraphic method (christened "the American method" by astronomer royal Sir George Airy) is explained, as well as the myriad mechanical problems and human factors that needed to be solved or accounted for in the perfection of the technique. Stachurski is at great pains to illustrate the many complicated factors that kept this from being a simple "comparison of two clocks" and his clear explanations leave one quite in awe of the work of the observers and statisticians of the C&GS. As he repeats

on several occasions, the governing rule was "Nothing left to chance; check and recheck."

Later chapters give fascinating accounts of the trans-Atlantic longitude campaign of 1855-56, which involved multiple ship crossings of dozens of chronometers, and of the various attempts to lay the first Atlantic cable. He concludes his story with the completion of the round-the-world telegraphic network, which was followed shortly by the first use of radio in longitude determination, in 1913. This is a very welcome and very readable contribution to the history of mapping technology.

Robert Karrow

Martín Sánchez Rodríguez and Herbert E. Eling, eds. *Cartografía Hidráulica de Guanajuato.* El Colegio de Michoacán/Consejo de Ciencia y Tecnología del Estado de Guanajuato, 2007.

This is a remarkable collaborative work about the historical hydrology of the province of Guanajuato, a little way north of Mexico City. Its twelve chapters, abundantly illustrated by maps, set out the sequence of water-supply from the early days of the Spanish conquest down to present times. With its wealth of hitherto unpublished maps, drawn from Mexican sources, this book is of considerable interest to historians of cartography.

David Buisseret

David A. Lanegran with Carol L. Urness. *Minnesota on the Map: A Historical Atlas.* St. Paul: Minnesota Historical Society Press, 2008.

This handsome volume is one of the most recent contributions to the history of cartography of the American states. The basic idea is to select a group of significant old maps of the region, state, and its various localities; then ar-

range them in chronological or topical order; and use the sequence to tell the story of the state and its people. We look forward to the time when every state will have such an atlas and this example would be a good place to start for anyone contemplating adding a volume on his or her own state.

Lanegran, a distinguished professor of geography at Macalester College, has spent a lifetime looking at maps as well as studying Minnesota topics. His concerns for the role of geography in current affairs, civic planning, historic preservation, and general education have paid special dividends in this book. Thus the chapters on the development of the twin cities, the landscapes of recreation, and transportation systems are of particular interest.

The effort started as a general idea as early as the 1960s but found a focus, and patronage, with Minnesota's sesquicentennial in 2008. The occasion led to generous sponsorship which placed color on every page and garnered a lot of help. Twenty-eight individuals are acknowledged for providing special assistance in a variety of ways plus the distinguished contribution of Carol Urness, the former curator of the James Ford Bell Library, who contributed the chapter on "The First European Views."

The book starts with a question. "Where is Minnesota?" It then works its way through about a hundred maps, dated from 1507 to the present, exploring various ways to answer the question. It ends, discussing the cartography of geographic information systems, with the observation that "these maps will, as they have always done, reflect the values of their times" and, in so doing will add to the sequence so that future citizens will be able to glimpse their state "as their predecessors saw it." (p. 200)

Gerald A. Danzer

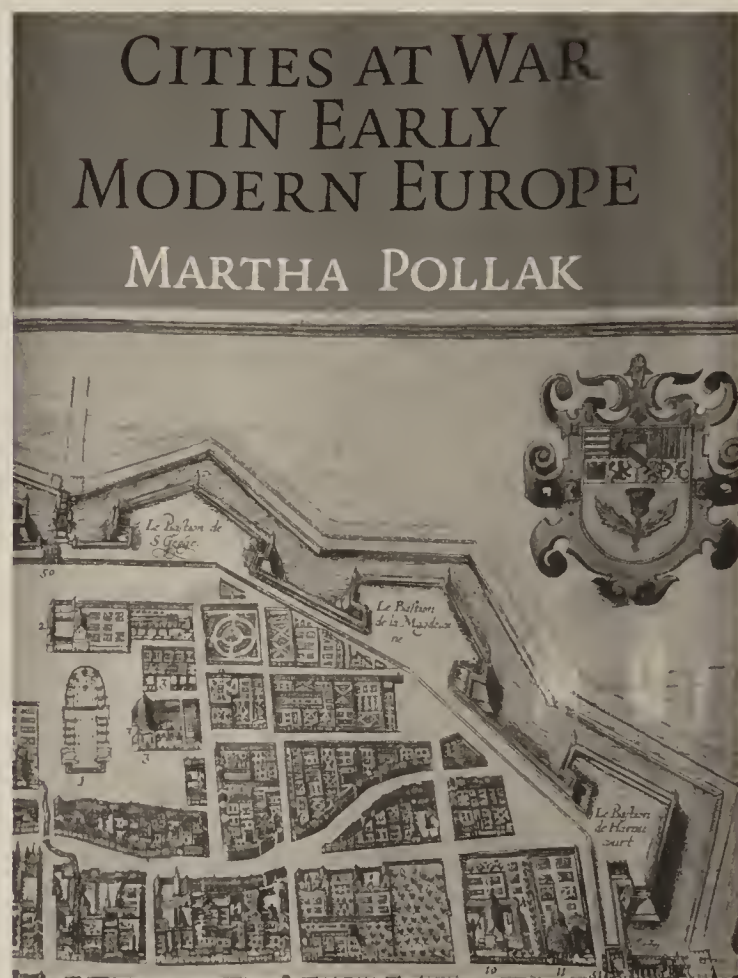
Martha Pollak. *Cities at War in Early Modern Europe.* Cambridge: Cambridge University Press, 2010.

Martha Pollak, longtime Newberry scholar and organizer in 1991 of an exhibit to mark the Tenth Series of Nebenzahl Lectures ("Profiling the City"), has now

published *Cities at War*, which is in effect a Europe-wide extension of many of the ideas that she put forward in *Turin 1564-1680* (The University of Chicago Press, 1991).

The new book relies very heavily on Newberry material, reminding us again of the depth of the Library's holdings in early modern European treatises on fortification. It also draws to great effect on Google Earth, whose images are particularly effective in a work on early modern town-planning.

David Buisseret



Newberry News

Robert W. Karrow, Jr., Curator of Special Collections and Curator of Maps, ended forty years of service at the Newberry Library with his retirement on August 4, 2011. **James Akerman** will replace Dr. Karrow as Curator of Maps while continuing to serve as Director of the Smith Center for the History of Cartography. In the next *Mapline* we will offer an appreciation of Bob's career.

The Hermon Dunlap Smith Center for the History of Cartography at the Newberry Library was founded in 1972 to promote the study of the history of cartography through public programs, institutes and seminars, research projects, fellowships, and publications. *Mapline* (ISSN 0196-1881) is the Center's newsletter. The cost of an annual subscription, inclusive of postage, is \$10.00 for delivery in North America and \$15.00 for international delivery. Back issues (as available) can be purchased for \$3.50 each. An index of past articles and book reviews is available on our web site. We encourage submissions of news items, lead articles, or review copies of recent books; please send them to the attention of the *Mapline* editor at smithctr@newberry.org or at the address listed below:

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Mapping the Transition from Colony to Nation

The Seventeenth Kenneth Nebenzahl, Jr., Lectures in the History of Cartography

The Smith Center hosted “Mapping the Transition from Colony to Nation,” the Seventeenth Kenneth Nebenzahl, Jr., Lectures in the History of Cartography, from November 4-6, 2010. The topic was conceived as a follow-up to “The Imperial Map,” the Fifteenth series of the lectures held at the Newberry in 2004 and published by the University of Chicago Press in 2009. That series surveyed the ways that imperial powers worldwide used maps to understand their colonies, to conquer them, to rule them, and to shape public opinion about their domination of these colonies both at home and abroad.



From left to right: Karen Culcasi, Ray Craib, Jamie McGowan, Sumathi Ramaswamy, Ken Nebenzahl, Jordana Dym, Lina del Castillo, Magali Carrera, Jim Akerman, and Tom Bassett.

“Mapping the Transition from Colony to Nation” shifted the focus to the subsequent historical stage of colonial revolution, decolonization. The series featured lectures by eight scholars that examined how peoples and states emerging from colonial status used maps to define, defend, and administer their national territories; to develop their national identities; and to establish their places in the community of nations.

The introductory lecture, titled “Mapping Decolonization and Nation in the Twentieth Century” was delivered by Raymond Craib, Cornell University. Dr. Craib’s presentation introduced some of this series’ fundamental terms and concepts—decolonization, formation of the nation-

state, and independence, among them—and their strong connections to questions of cartography.

Magali Carrera, University of Massachusetts-Dartmouth, followed with her talk, “Emerging Geographical and Cartographical Knowledge in Eighteenth-Century New Spain.” Dr. Carrera’s lecture outlined how maps and mapmaking became the site of both domination and resistance as imperial administrators and local actors alike marshaled the power of maps to assert their claims on land and identity.

Next, Lina del Castillo, John Carter Brown Library fellow, delivered her paper, “Traveling Maps, Frustrated Creole Desires, and the Reconfiguration of Imperial Designs: The Case of the Gran Colombian Mapping Commission, 1819-1830.” Ms. Del Castillo outlined the ways that revolutionaries in Spanish South America used the power of cartography to create a narrative and mythology that legitimized their struggling revolutionary movement and at the same time quelled dissent, glorified only certain leaders and events, and dismissed others through omission.

Jordana Dym, Skidmore College, traced questions of national identity with her presentation, “Democratizing the Map: Between Imperial and National Mapping in Guatemala, 1821-2010.” Using Guatemala as a case study, Dr. Dym identified the role of both official governmental and commercial or civilian mapping in forming the notion of the geobody. Her talk emphasized the long duration of the transition from colony to nation and how maps continue into the present day to be a locus for debate about what constitutes the true geographical and social identity of the nation.

Tom Bassett, University of Illinois at Urbana-Champaign, brought decolonizing Africa into the purview of the Lectures with his talk, “Signs of the Times: Commercial Road Mapping and National Identity in South Africa.” Dr. Bassett’s study took the dismantling of apartheid South Africa as a post-colonial moment. He showed how commercial road mapping firms reinforced and reproduced geographically the ingrained inequalities and hierarchies of apartheid society by deviating from accepted mapping practices. These cartographic alterations ranged from

downgrading the size of the font used to label black-majority townships, re-routing the white tourists who used their maps around black communities, to, in extreme cases, eliding entire black communities.

Jamie McGowan, University of Illinois at Urbana-Champaign, presented her findings on post-colonial Ghana in a paper titled, "Mapping Independence in Ghana: Scientific Standards and Political Possibilities." Her work, based partly on in-person interviews with former members of Ghana's Survey Department, revealed that in some cases, the process of decolonization—although it brought some administrative changes to government bureaus—was more remarkable for the continuity of cartographic practices than for any fundamental changes.

Sumathi Ramaswamy, Duke University, brought Southeast Asia into the discussion with the talk, "Lines of Power, Contours of Desire: The Partitioning of Lands and Lives in Our Times." Dr. Ramaswamy introduced the role of affect—desire, pleasure, yearning and mourning—to the persistent questions of relationship between cartography and decolonization. She traced how the modern map

of India was transformed via artistic visual representations to become Mother India. Depictions of this anthropomorphized map—and the bodily harm done to her in the partitioning of India—in turn became a visually striking way for artists to express the emotional trauma brought on by decolonization.

Karen Culcasi, University of West Virginia, concluded the series with her paper, "Cartographic Constructions of the Modern Egyptian Nation-State." Dr. Culcasi considered the role that both government and popular cartography has had in forming a highly contested national identity in Egypt since official independence in 1922. Her talk brought out the complex global and local territorial components of Egypt's national identity by considering cartographic developments not just at the scale of the nation-state, but also at the transnational, and sub-national levels.

The Nebenzahl Lectures are made possible through the generous support of Ken and Jossy Nebenzahl, as they have been since 1966.

Will Gosner

2010 Summer Institute in the History of Cartography

For five weeks in June and July 2010, 25 college and university faculty and graduate students from across the country gathered at the Newberry to participate in a five-week summer institute examining the interplay between American art and mapping from the Transatlantic Encounter into the 21st century. "Mapping and Art in the Americas," was supported by the National Endowment for the Humanities (NEH) and co-directed by Smith Center Director Jim Akerman and Diane Dillon, an art historian and the Newberry's Director of Scholarly and Undergraduate Programs. Fourteen guest faculty specializing in art, cartography, geography, philosophy, American history, map librarianship, and literary studies provided a broad range of disciplinary and thematic perspectives on the topic through a series of seminars, workshops, and lectures.

On most mornings, the participating summer scholars attended three-hour sessions led by the co-directors or invited faculty. Most of these sessions were enlivened by presentations of selected maps and books from the Newberry's collections. The first part of the institute, "Maps in

Art, Art in Maps" provided a broad overview of the historical and cultural relationship between art and cartography, seen from multiple disciplinary perspectives, including those of practicing cartographers and artists. Guest faculty for these sessions included: **John Krygier** (Geography, Ohio Wesleyan University) a leading commentator within academic geography on the contemporary cross-fertilization of cartographic and artistic practices; **Dennis McClendon**, a respected Chicago cartographer; **Edward S. Casey** (Philosophy, SUNY-Stony Brook) author of several books concerned with the representation of space and place in topographical art and maps; Brooklyn, New York artist **Nina Katchadourian**; **Laurie Palmer** (Sculpture, School of the Art Institute of Chicago) and **Dianna Frid** (Art and Design, University of Illinois at Chicago), two local artists whose work broadly addresses spatial, cartographic, and environmental themes; and **Gregory Knight** (independent art curator), curator of two past Chicago exhibitions of map art.

Part II, "Images of Colonial America" examined how maps and art shaped Europeans' understanding of America

and their imperial ambitions, while indigenous traditions presented alternatives and responses to European spatial representations. Three guest faculty guided exploration of this topic: **Bronwen Wilson** (Art History, University of British Columbia), a specialist in Renaissance art and author of *The World in Venice: Print, the City, and Early Modern Identity*; **Ricardo Padrón** (Spanish, University of Virginia) author of the *The Spacious Word* and a leading authority on the mutual influences of early modern mapping, art, and literature; and **Barbara Mundy** (Art History, Fordham University), a specialist in the history of indigenous and colonial art in New Spain and author of *The Mapping of New Spain: Indigenous Cartography and the Maps of the Relaciones Geográficas*.

Part III, "Maps, Art, Nation, and Identity in the 19th-21st Centuries," considered how new genres of commercial and scientific mapping, fine and commercial art, and graphic propaganda shaped and responded to

emerging national identities, modern consumerism, tourism, and politics. Guest faculty for these sessions included **Magali Carrera** (Art History, University of Massachusetts-Dartmouth), author of two books on identity, maps, and art in New Spain/Mexico; **Bob Karrow** (then Curator of Maps, the Newberry Library); **Joni Kinsey** (Art History, University of Iowa), a specialist in 19th-century American landscape, topographic, and expeditionary art; and **Susan Schulten** (History, University of Denver), author of several studies on the relationship between cartography and governance, popular culture, and pedagogy in the United States in the 19th and 20th centuries, including *The Geographical Imagination in America, 1880-1950*. Akerman and Dillon presented two concluding sessions on the role of maps and art in consumer culture, travel, tourism, and urban planning in the 19th and 20th centuries.

During the five weeks of the institute, the summer scholars pursued an intensive program of lectures, seminars, and readings. Together, they discussed recent scholarship from multiple disciplines and studied original maps, literature, and art from the Newberry's collections. We devoted most weekday mornings during the institute to a combination of lectures and seminar discussions of readings and images led by the co-directors and guest faculty. Participants had the opportunity to meet and discuss their interests with faculty during informal brown bag lunches and early afternoon office hours. These sessions were complemented by field trips to the Art Institute of Chicago, the Chicago Cultural Center, and the studios of

local artists to view and discuss map-related art. Scholars also pursued their own research projects making use of the Newberry Library's rich holdings of cartography, geography, art, history, literature, and the history of printing. Each scholar presented

a research report to the entire group during the final three days of the institute.

The institute was the eighth NEH summer seminar or institute organized by the Smith Center since 1996. Six further summer institutes were organized by Smith Center Directors David Woodward and David Buisseret during the 1980s and early 1990s. Previous programs addressed the relationship between maps and history, examined the history of popular cartography, and the teaching of cartographic literacy. Akerman and Dillon organized another summer program for school teachers, *Envisioning America in Maps and Art*, in July and August 2011. We will have a report on that program in the next issue.

Jim Akerman



Map Talk



Plate from Sven Hedin, *Through Asia* (London/New York, 1899), Newberry Library call number G 60 .39

From Philip Hensher, *The Mulberry Empire* (New York, 2002)

[an English emissary is trying to enter Afghanistan, about 1840; his luggage is being examined]

“Good, good,” the customs officer said, as the underlings turned the object upside down, trying to force a noise from it. “And what is it?”

“It is called a sextant in my language,” Burnes said, “a sort of talisman.”

“Good, good,” the customs officer said, “in my country we have many sextants.”

It was a long afternoon, but eventually the possessions had all been examined and packed up again. Nothing seemed to excite their interest except Gerard’s bottles of medicine, which they passed around, sniffing at; the maps did not seem to trouble anyone.